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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,368	10/07/2005	Fiorenzo Renzi	278930US0XPCT	8290
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
BERNSHTEYN, MICHAEL				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
05/15/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/552,368

Applicant(s)

RENZI ET AL.

Examiner

MICHAEL M. BERNSTEYN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 1, 15, 16 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 10/07/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

1. Claims 1, 15, 16 and 19 are objected to because of the following informalities:

Claim 1 recites "radical polymerization" instead of well known "radical polymerization".

Claim 15, lines 2 and 3 recites "the transesterification reaction is carried, out, with reaction times ranging from 0.5 to 3 hours". The letter "s" at the end of the word "times" and two commas should be deleted.

Claim 16, line 2 recites "from the group consisting of methyl.methacrylate,..."
Period after the word "methyl" should be deleted.

Claim 19, line 4 recites "polymerization times". The letter "s" at the end of the word "times" should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 contains the trademark/trade names Veo Va 9 and Veo Va 10. Where a trademark or trade name is used in a claim as a limitation to identify or describe a

particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe vinyl esters of versatic acids and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as unpatentable as obvious over Renzi et al. (WO 00/27794) in view of Renzi et al.(EP 0 473 163 A1) . The U. S. Patent 6,812,265 is equivalent to the WO 00/27794; therefore, the following rejection is based upon the context of U.S. Patent 6,812,265).

With regard to the limitations of claims 1-3, Renzi'265 discloses a liquid composition which can be polymerized into organic glasses, by means of radical polymerization with low shrinkage, comprising the product obtained from the transesterification of a diallylcarbonate (A) with a mixture of one or more linear or branched aliphatic diols (B), containing from three to ten carbon atoms in the molecule, with a linear or branched aliphatic polyol (C), containing from four to twenty carbon atoms and from three to six hydroxyl groups in the molecule. The molar ratio A/(B+C) in the above polymerizable liquid composition ranges from 2/1 to 5/1 and the quantity of (C) in the mixture (B+C) is equal to or less than 25% by weight with respect to the total weight of this mixture (abstract).

A group of polymerization initiators which can be used is the group of peroxides. Preferred examples of peroxides which can be used are dicyclohexylperoxydicarbonate, diisopropylperoxydicarbonate, dibenzoylperoxide, di-s-butyl-peroxydicarbonate, **s-butylcyclohexylperoxydicarbonate**, etc. (col. 3, lines 60-67). The quantity of initiator used may generally vary within a range of 1 to 6 parts by weight for every 100 parts by weight of the composition, which is within the claimed range (col. 2, lines 9-12).

With regard to the limitations of claim 1, Renzi'265 does not disclose the usage of dibenzoyl peroxide.

Renzi'163 discloses that some examples of the initiators are organic peroxide and percarbonate such as dicyclohexylperoxy dicarbonate, di-s-butyl-peroxydicarbonate, dibenzoyl peroxide, etc (page 3, lines 38-42).

Therefore, "It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be *prima facie* obvious.). See also *In re Crockett*, 279 F.2d 274, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the aforementioned components individually promote the formation of a nodular structure in cast iron.); and *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held *prima facie* obvious). Also, the art has recognized these compounds as functional equivalents; therefore it is *prima facie* obvious to substitute one for another, barring a showing of unexpected results.

With regard to the limitations of claims 4 and 5, Renzi'265 discloses that specific examples of diols (B) which can be used for the purposes of the present invention are:

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diethylene glycol, triethylene glycol, tetraethylene glycol, 1,4-butanediol, 1,6-hexanediol, 1,3-propanediol, neopentylglycol, dipropylene glycol, 2,2,4-trimethyl-1,3-pentanediol, etc. Preferred diols are **diethylene glycol** and **neopentylglycol** (col. 2, lines 50-56).

With regard to the limitations of claims 6 and 7, Renzi'265 discloses that preferred polyols are **pentaerythritol** and **trimethylolpropane** (col.2, lines 66-67).

With regard to the limitations of claim 8, Renzi'265 discloses that the polymerizable liquid composition is obtained starting from diallyl carbonate (A) and the mixture (B+C) operating under transesterification conditions. More specifically, the reagents are put in contact with each other, in the ratios indicated above, and reacted at a temperature ranging from 80°C to 160°C, in the presence of a catalyst of the alkaline type, continuously eliminating the allyl alcohol formed as reaction by-product (col. 3, lines 1-8).

With regard to the limitations of claims 9 and 10, Renzi'265 discloses that catalysts of the alkaline type which can be used are hydroxides, carbonates and alcoholates of alkaline metals, organic bases, and basic ion-exchange resins. Specific examples of catalysts of the alkaline type used are sodium hydroxide, sodium carbonate, sodium methylate (col. 3, lines 9-15).

With regard to the limitations of claims 11 and 12, Renzi'265 discloses that the catalyst is conveniently used in a quantity equal to at least 1 ppm (parts per million by weight) with respect to the sum of the weights of components (B+C) and, preferably, in a quantity ranging from 0.01% to 0.3% by weight., which is within the claimed ranges (col. 3, lines 16-20).

With regard to the limitations of claims 13-15, Renzi'265 discloses that the transesterification reaction is conveniently carried out at such a pressure as to bring the system to boiling point at the preselected operating temperature, in order to favor the elimination, of the allyl alcohol from the reaction mixture: for example, pressure values ranging from 60 mbar to 1030 mbar, preferably from 60 mbar to 500 mbar, are suitable for the purpose. Operating under the conditions described above, the reaction times generally range from 0.5 hours to 20 hours, preferably from 0.5 hours to 3 hours, which is clearly within the claimed range (col. 3, lines 21-30).

With regard to the limitations of claims 16 and 17, Renzi'265 does not disclose that the composition contains a specific component 2).

Renzi'163 discloses that the composition may contain a further component (iii) composed of one or more acrylic, vinylic or allylic monomer (different from allyl carbonates), which can be polymerized with poly(allyl carbonate) or polyhydroxy alcohol (i) in quantities from 0 to 50% by weight of the composition, normally from 0 to 25% by weight. Examples of these monomers are methyl acrylate, methyl methacrylate, phenyl methacrylate, vinyl acetate, vinyl benzoate, diallyl phthalate, diallyl adipate and triallyl cyanurate (page 3, lines 29-34 and claim 7)

Both references are analogous art because they are from the same field of endeavor concerning new liquid compositions polymerizable into organic glasses. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the second component, which is selected from the above mentioned group in the adjusted amount as taught by Renzi'163 in Renzi'265

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polymerizable liquid composition with reasonable expectation of success because the addition of such component allows to produce an almost colorless and easily dyeable organic glass (EP'163, abstract), and thus to arrive at the subject matter of instant claims 16 and 17.

With regard to the limitations of claim 18, Renzi'265 discloses that the composition may optionally contain one or more conventional additives such as, for example, oxidization, light and heat stabilizers, lubricants, dyes, pigments, UV-absorbers, IR-absorbers, and the like, in a total quantity however not exceeding 1 part by weight for every 100 parts by weight of the compositions themselves, which is within the claimed range (col. 4, lines 12-18).

With regard to the limitations of claim 19, Renzi'265 discloses that the composition containing the polymerization initiator and, optionally, one or more additives selected from those mentioned above, is transformed into the relative organic glasses, operating at temperatures ranging from 30°C to 120°C, with polymerization times which can generally vary from 1 hour to 100 hours, which is within the claimed range (col. 4, lines 23-28).

. With regard to the limitations of claims 20 and 21, Renzi'265 discloses that during the polymerization there is a limited shrinkage and the organic glasses thus obtained have good optical and physico-mechanical properties. These organic glasses are particularly useful in the production of ophthalmic lenses and solar filters, protective shields, sight windows, solar and photovoltaic collectors and panels, substrates for optical disks, panels for display and video terminals (col. 4, lines 29-37).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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